Appln. No.: 10/591,632

Amendment Dated April 20, 2009

Reply to Office Action of December 18, 2008

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application

## Listing of Claims:

- 1. (Previously Presented) A method of manufacturing a catalysed ceramic wall-flow filter comprising a plurality of channels, which method comprising the steps of:
  - (a) reducing the pressure in a pore structure of the channel walls relative to the surrounding atmospheric pressure to provide evacuated channel walls,
  - (b) contacting a surface of the evacuated channel walls with a liquid containing at least one catalyst component or a precursor thereof, whereby the liquid permeates the evacuated channel walls,
  - (c) drying the filter containing the catalyst component or its precursor, and
  - (d) calcining the filter containing the catalyst component or its precursor.
- 2. (Previously Presented) A method according to claim 1, wherein steps (b) and (c) are repeated at least once prior to step (d).
- 3. (Previously Presented) A method according to claim 1, wherein the pressure reduction in the pore structure of the channel walls is maintained during the liquid contacting step.
- 4. (Previously Presented) A method according to claim 1, wherein the liquid contains the precursor and comprises an aqueous solution of at least one metal salt.
- 5. (Previously Presented) A method according to claim 1, wherein the liquid containing at least one catalyst component comprises a slurry of at least one particulate metal oxide material in a carrier medium.
- 6. (Previously Presented) A method according to claim 5, wherein the at least one particulate metal oxide material has a D50 in the range 1-20,  $\mu$ m.
- 7. (Previously Presented) A method according to claim 1, wherein the liquid containing the at least one catalyst component comprises a sol of at least one metal oxide material in a carrier medium.

Appln. No.: 10/591,632 JMYT-370US

Amendment Dated April 20, 2009

Reply to Office Action of December 18, 2008

8. (Previously Presented) A method according to claim 7, wherein the sol particles have a D50 in the range 10-500 nm.

- 9. (Canceled)
- 10. (Previously Presented) A method according to claim 1, wherein the at least one catalyst component is loaded in the catalysed ceramic wall-flow filter in an amount from 20-120g/litre.

## 11. - 14. (Canceled)

- 15. (Previously Presented) A method according to claim 1, wherein the ceramic filter is made from a material selected from the group consisting of silicon, silicon carbide, aluminium nitride, silicon nitride, aluminium titanate, alumina, cordierite, mullite pollucite and a thermet.
- 16. (Previously Presented) A method according to claim 1, wherein the filter has a porosity of 40-60%, prior to use.
- 17. (Canceled)
- (Previously Presented) Apparatus for use in manufacturing a catalysed ceramic wall-flow filter having filter walls, wherein said filter walls define a plurality of channels and have a pore structure, said apparatus comprising means for sealingly isolating the plurality of channels of the ceramic wall-flow filter from the surrounding atmosphere, means for reducing pressure in the isolated channels to below the surrounding atmospheric pressure thereby to establish a vacuum in the pore structure of the filter walls to provide isolated and evacuated channels, at least one reservoir for holding a liquid containing at least one catalyst component or a precursor thereof and means for dosing the isolated and evacuated channels with a pre-determined quantity of the liquid.
- 19. (Previously Presented) Apparatus according to claim 18, wherein the means for sealingly isolating the plurality of channels comprises a pressurisable container having a sealable closure for receiving the ceramic wall-flow filter.
- 20. (Previously Presented) An apparatus according to claim 18, wherein the means for maintaining the reduced pressure in the isolated channels to below the surrounding

Appln. No.: 10/591,632

Amendment Dated April 20, 2009

Reply to Office Action of December 18, 2008

atmospheric pressure comprises means for maintaining the reduced pressure during dosing of the liquid.

- 21. (Previously Presented) An apparatus according to claim 18 wherein the apparatus is at least semi-automated to control both the means for reducing pressure in the isolated channels and the means for dosing the liquid.
- 22. (Previously Presented) A method according to claim 5, wherein the carrier medium comprises water.
- 23. (Previously Presented) A method according to claim 7, wherein the carrier medium comprises water.
- 24. (Previously Presented) A method according to claim 15, wherein the material from which the ceramic filter is made is the thermet, wherein the thermet is selected from the group consisting of  $Al_2O_3/Fe$ ,  $Al_2O_3/Ni$  and  $B_4C/Fe$ .